Animate a Plot

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Goal: Guide you through some basic animation features.

Before running the tutorial below, type *"python"* or *"cdat"* at the command line.Â You will see the python prompt appear (i.e., ">>>"). You can now enter the command lines below.

You can ***view***Â or ***download***Â the full source code. To run the source code at the command line, type: *"python −i animate.py"*.

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# Import the modules needed for the tuturial
# cdms - Climate Data Management system accesses gridded data.
# vcs - Visualization and control System 1D and 2D plotting routines.
# cdutil - Climate utilitizes that contains miscellaneous routines for
#          manipulating variables.
# time - This module provides various functions to mainpulate time values.
# os - Operation System routines for Mac, DOS, NT, or Posix depending on
#      the system you're on.
# sys - This module provides access to some objects used or maintained by
#       the interpreter and to functions that interact strongly with the interpreter.
import vcs, cdms, cdutil, time, os, sys

# Open data file:
filepath = os.path.join(sys.prefix, 'sample_data/clt.nc')
cdmsfile = cdms.open( filepath )

# Extract a 3 dimensional data set and get a subset of the time dimension
data = cdmsfile('clt', time=('1980-1-1 0:0:0.0', '1981-12-1 0:0:0.0'), longitude=(-180, 180), lat

# Initial VCS:
v = vcs.init()

# Plot data using the default isofill graphics method:
v.isofill( data )




# Create the images required for animation
v.animate.create( thread_it = 0 )

# Run the animation using the images created
v.animate.run( )



# Stop the animation
v.animate.stop( )

# Run the animation and pause between frames
v.animate.run( )
v.animate.pause( 3 )

# Zoom in on the animated frames
v.animate.zoom( 2 )
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# Move the animation horizonatally to the up and down
v.animate.horizontal( 50 )

# Move the animation vertically left and right
v.animate.vertical( 50 )

# Stop the animation and view frame 5, 10, and 15
v.animate.stop( )
v.animate.frame( 5 )
v.animate.frame( 10 )
v.animate.frame( 15 )

# Control the animate via the animation GUI
v.animate.gui( )
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